



METHOD FOR ASSAYING COMPOUNDS AFFECTING CELL  
DIVISION USING ESTROGEN RECEPTOR BETA (ER $\beta$ ) AND  
MITOSIS ARREST DEFICIENT 2 (MAD2)

Michael E. Mendelsohn Filing Date: July 13, 1999

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Fig. 1A

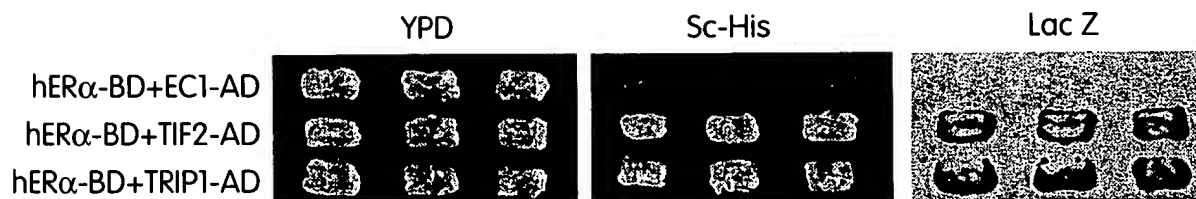


Fig. 1B



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EC1.txt      1:-----CGGGAGCAAGGCATCACCTTGCGCGGGAGCGCCGAGATCGTG 42
mad2.txt     1:ATGGCGCTGCAGCTCTCCCGGGAGCAGGGAATCACCTTGCGCGGGAGCGCCGAAATCGTG 60
               ***** ** ***** *****

EC1.txt      43:GCCGAGTTCTTCTCATTGTTGATCAACAGTATTTTATATCAGCGTGGCATATATCCATCG 102
mad2.txt     61:GCCGAGTTCTTCTCATTGCGCATCAACAGCATTGTTTATATCAGCGTGGCATATATCCATCT 120
               ***** ** ***** *****

EC1.txt      103:GAAACCTTTACTCGAGTGCAGAAATATGGACTCACCTTGCTTGTAAGTACTGATCCTGAG 162
mad2.txt     121:GAAACCTTTACTCGAGTGCAGAAATACGGACTCACCTTGCTTGTAAGTACTGATCTTGAG 180
               ***** ***** *****

EC1.txt      163:CTCATAAAATACCTAAATAATGTGGTGGATCAACTAAAAGAATGGTTATACAAGTGTTCA 222
mad2.txt     181:CTCATAAAATACCTAAATAATGTGGTGGAACTGAAAGATTGGTTATACAAGTGTTCA 240
               ***** ***** *****

EC1.txt      223:GTTTCAGAACTGGTGGTAGTCATCTCAAATATTGAAAGTGGAGAGGTCCTTGAAAGATGG 282
mad2.txt     241:GTTTCAGAACTGGTTGTAGTTATCTCAAATATTGAAAGTGGTGGAGGTCCTGGAAGATGG 300
               ***** ***** *****

EC1.txt      283:CAGTTTGATATTGAGTGTGACAAGACTGCAAAAGATGACAGTGCACCCAGAGAAAAGTCT 342
mad2.txt     301:CAGTTTGATATTGAGTGTGACAAGACTGCAAAAGATGACAGTGCACCCAGAGAAAAGTCT 360
               ***** ***** *****

EC1.txt      343:CAGAAAGCTATCCAAGATGAAATCCGTTTCAGTGATCAGACAGATCACAGCTACAGTAACA 402
mad2.txt     361:CAGAAAGCTATCCAGGATGAAATCCGTTTCAGTGATCAGACAGATCACAGCTACGGTGACA 420
               ***** ***** *****

EC1.txt      403:TTTCTGCCACTGTTGGAAGTTTCTTGTTTCATTGATCTCCTCATTATACAGACAAAGAT 462
mad2.txt     421:TTTCTGCCACTGTTGGAAGTTTCTTGTTTCATTGATCTGCTGATTATACAGACAAAGAT 480
               ***** ***** *****

EC1.txt      463:CTGGTTGTNCCTGAGAAATGGGAAGA-TCNGGACCACAGTTCATTACCAATTCTGAAGAA 521
mad2.txt     481:TTGGTTGTACCTGAAAAATGGGAAGAGTCGGGACCACAGTTTATTACCAATTCTGAGGAA 540
               ***** ***** *****

EC1.txt      522:GTTTCGTCTTCGTTCACTACTACAATTCACAAAGTAAATAGCATGGTAGCCTACAAA 581
mad2.txt     541:GTGCGCCTTCGTTCACTACTACAATTCACAAAGTAAATAGCATGGTGGCCTACAAA 600
               ** ** ***** ***** *****

EC1.txt      582:ATTCCTGTCCATGACTGA 599
mad2.txt     601:ATTCCTGTCAATGACTGA 618
               ***** *****
```

Fig. 2A



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EC-1: 1 REQGITLPGSAEIVAEFFSFGINSILYQRGYIPSETFTRVQKYGLTLLVTTDPELIKYN 60  
REQGITL GSAEIVAEFFSFGINSILYQRGYIPSETFTRVQKYGLTLLVTTD ELIKYN  
hsMAD2: 7 REQGITLRGSAEIVAEFFSFGINSILYQRGYIPSETFTRVQKYGLTLLVTTDLELIKYN 66

EC-1: 61 NVVDQLKEWLYKCSVQKLVVVISNIESGEVLERWQFDIECDKTAKDDSA PRQKSQKAIQD 120  
NVV+QLK+WLYKCSVQKLVVVISNIESGEVLERWQFDIECDKTAKDDSA PR+KSQKAIQD  
hsMAD2: 67 NVVEQLKDWLYKCSVQKLVVVISNIESGEVLERWQFDIECDKTAKDDSA PREKSQKAIQD 126

EC-1: 121 EIRSVIRHITATVTFLPLEVSCSFDLLIYTDKDLVVPEKWEXSGPQFITNSEELRLRSF 180  
EIRSVIR ITATVTFLPLEVSCSFDLLIYTDKDLVVPEKWE SGPQFITNSEE+RLRSF  
hsMAD2: 127 EIRSVIRQITATVTFLPLEVSCSFDLLIYTDKDLVVPEKWEESGPQFITNSEEVRLRSF 186

EC-1: 181 TTTIHKVNSMVAYKIPVHD 199  
TTTIHKVNSMVAYKIPV+D  
hsMAD2: 187 TTTIHKVNSMVAYKIPVND 205

Fig. 2B

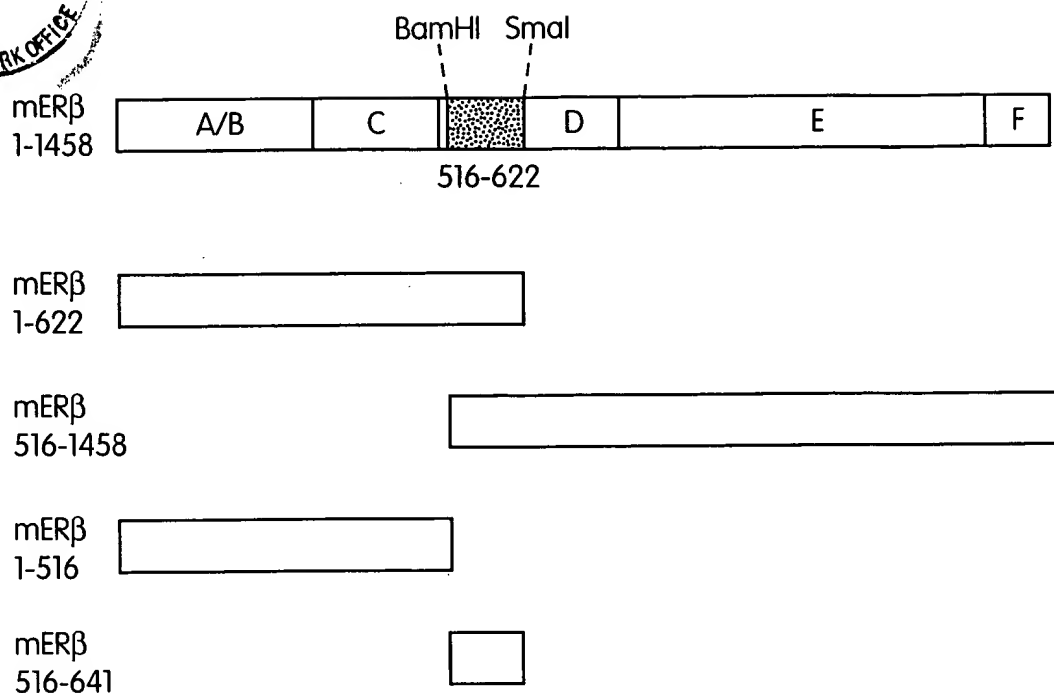


Fig. 3A

BD	AD	HIS	β-Gal
EC1	/-	-	-
EC1	/AD	-	-
EC1	/mERβ516-1458	+	+
EC1	/mERβ	+	+
BD	/mERβ516-1458	-	-
mERα	/mERβ516-1458	+	+
mERβ1-622	/EC1	+	+
mERβ1-516	/EC1	-	-
mERβ1 516-641	/EC1	-	-
mERβ1-622	/AD	-	-
mERβ1-516	/AD	-	-
mERβ	/EC1	+	+
BD	/EC1	-	-

Fig. 3B



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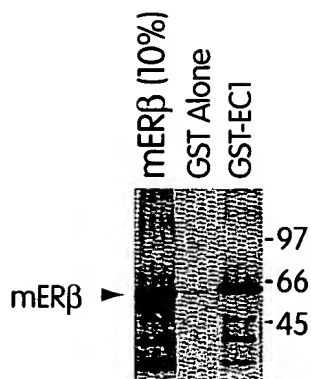


Fig. 4A

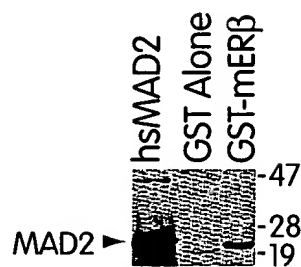


Fig. 4B

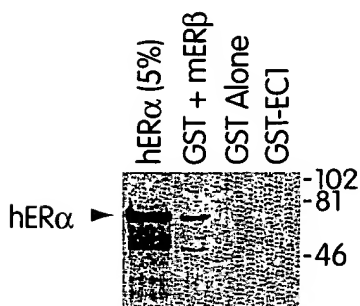


Fig. 4C

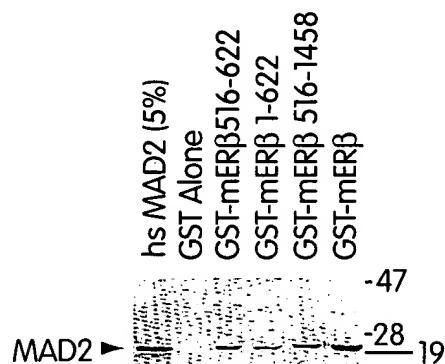


Fig. 4D